Remarks

Claim Objections

Claims 29 and 30 were amended to correct the informalities described by the Examiner. The amendments are supported in the specification as filed at, for example, the working examples and page 19, lines 24-31 and page 20, lines 1-5.

Claims 54 and 55 are amended as suggested by the Examiner to conform to current nomenclature.

Claims 35, 36 and 49 and 50 were Cancelled in the previous action; Applicant contends that there was no cancellation of the Claims 34 and 48, nor any intent to cancel those claims, in the previous Response by the Applicant.

Other Claim amendments

In claims 23 and 40, the phrase —the ionizing activator— was added to clarify the claim.

Section 102 Rejections

Claims 23-26, 28, 30, 33, 37, 39, 40-42, 44, 47, 51 and 53 were rejected under 35 U.S.C. § 102(b) as being anticipated by US 5,824,393 (Jacobsen). The Applicant traverses this rejection, as *Jacobsen* does not disclose the Applicant's claimed invention as filed and amended.

Jacobsen is directed to the use of modified activators that include hydroxy or amino aryl groups (see working examples) or "active hydrogen moieties" such as described at col. 9, lines 9-22, that is used to presumably react with a support material that has been pretreated (see discussion at col. 8, lines 19-34).

Applicant's invention as amended and claimed originally excludes the "active hydrogen" type of activators, as these are in any event disadvantageous due to the complexity and cost of manufacture. *Jacobsen* does not disclose such an activator. Applicant has found a process that is simpler and more economical to produce higher efficiency catalyst compositions.

In particular, the Claims 23 and 40 are amended to further define the "$(L'\text{-}H)^+$" as being —selected from the group consisting of includes ammoniums, oxoniums, phosphoniums, silyliums and mixtures thereof, preferably ammoniums of methylamine, aniline, dimethylamine, diethylamine, N-methylaniline, diphenylamine, trimethylamine, triethylamine, N,N-dimethylaniline, methyldiphenylamine, pyridine, p-bromo-N,N-dimethylaniline, p-nitro-N,N-dimethylaniline, phosphoniums, oxomiuns, sulfoniums, silver, carboniums, tropylium, carbeniums, ferroceniums and mixtures thereof;—. This limitation derives from the specification as filed at page 16, lines 11-25. The phrase "L' is a neutral Lewis base;" in Claims 23 and 40 are deleted as superfluous in light of the added limitation above. No new matter is believed to be added.

In Claims 23 and 40, the definition of the "A" group by the phrase "A^{d-} is a non-coordinating anion having the charge d-" eliminates the presence of groups such as hydroxy or amino groups attached to an aryl that could bind, for example, to a support material or aluminum alkyl treated support material, such as described in *Jacobsen*. The amended Claims 23 and 40 further eliminates the presence of groups such as hydroxy or amino groups attached to an aryl that could bind, for example, to a support material or aluminum alkyl treated support material.

While *Jacobsen* discloses a very broad range of "activator compounds" based on the formula "G(T—H)" (col. 8, lines 36-67 and col. 9), the working examples starting at col. 26, line 27 are exclusively those having hydroxy or amino substituted aryl groups, such as mentioned in the preferred embodiment at col. 9, lines 9-22. *Jacobsen* does not disclose the Applicant's invention as claimed wherein the "$(L'\text{-}H)^+$" and "A" groups do

not include hydroxy or amino aryls. Applicant's amended claim excludes such an ionizing activator.

The Applicant thus requests this rejection be withdrawn.

Claims 23-26, 28, 30, 33, 37, 39, 40-42, 44, 47, 51 54 and 55 were rejected under 35 U.S.C. § 102(a) as being anticipated by US 6,143,685 (*Llinas*). The Applicant traverses this rejection, as *Llinas* does not disclose the Applicant's claimed invention as amended.

In particular, the "supported alumoxane" is further defined to be —wherein an inorganic oxide and an alumoxane are contacted to form the supported alumoxane—, support for which is found at page 12, lines 3-15 and the examples of the specification as filed. No new matter is believed to be added.

Llinas discloses the use of "functionalized" supports wherein "functionalization of the inorganic oxide is by introduction of functional groups to be used to strongly fix the organoaluminum compound and the organometallic compound". (Abstract) The functionalizing compound is as disclosed in formula (I) at col. 4, lines 20-25 of *Llinas*. Applicant's amended claim excludes such a functionalized activator.

The Applicant thus requests this rejection be withdrawn.

Section 103 Rejections

Claims 27, 29, 38, 43 and 52 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jacobsen* in view of US 5,674,795 (Wasserman). The Applicant traverses this rejection first, as these claims are dependent on allowable independent claims and second, as the examples of the present invention show an unexpected result in having enhanced activity. It could not have been deduced from *Wasserman* that the order of addition of various specific components would enhance the activity, in most cases two-

fold, of the example catalyst compositions as shown in Table 2 of the present specification. Given the unpredictable nature of the chemical arts, the present invention is surprising, especially since *Wasserman* is deficient in not disclosing the order of addition or an ionizing activator.

The Applicant thus requests this rejection be withdrawn.

Claims 31, 32, 45, and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jacobsen* in view of US 6,066,703 (Reichle). The Applicant traverses this rejection first, as these claims are dependent upon allowable independent claims and second, as the examples of the present invention show an unexpected result in having enhanced activity. Given the unpredictable nature of the chemical arts, the present invention is surprising, especially since *Reichle* is deficient in not disclosing the order of addition of the components.

The Applicant thus requests this rejection be withdrawn.

It is submitted that the case is in condition for allowance. The Applicant invites the Examiner to telephone the undersigned attorney if there are any other issues outstanding which have not been presented to the Examiner's satisfaction.

Respectfully submitted,

May 7/04
Date

Kevin M. Faulkner
Attorney for Applicants
Registration No. 45,427

Univation Technologies, LLC
5555 San Felipe, Suite 1950
Houston, Texas 77056-2723
Phone: 713-892-3729
Fax: 713-892-3687